30374

S/572/61/000/007/005/006
D221/D302

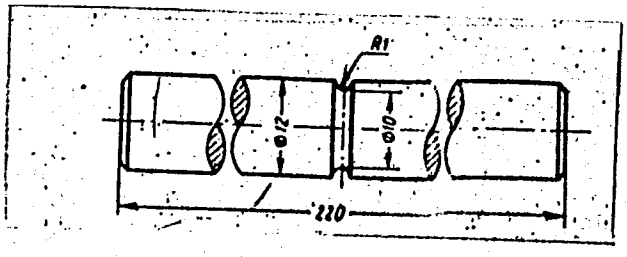
The calculation of variable ...

a circular plate with reinforcing ring ribs. The evolved method of calculating variable section plates reinforced by ribs leads to functions of sag y (ρ), angle of inclination $\alpha(\rho)$ and the radial displacement $u(\rho)$ of the equivalent plate with constant thickness to coincide with the same functions of the stepped profile. The proposed procedure of computations is as follows. The thickness of the equivalent plate h, is fixed, usually being equal to the thickness of the first section. Then steps and knees in the curve of pressure, as well as transversal forces of the equivalent are calculated. This is followed by assessment of coefficients. Taking into account the conditions at the internal contour, functions of the sag, angle of torsion of the normal, internal bending moments, radial displacements and compressive forces of the profiled plate are then evaluated. The auxiliary quantities of A_j, X_i ... are found which permit the initial parameters M_o, α_o, u_o and H_o to be determined. After evaluation of radial and circular normal stresses in the centers of sections with constant thickness, and steps in the curves of normal and radial stresses due to ribs, a plot is made of stresses produced in the calculated variable section ribbed plate. A numerical example is given. There are 16 figures, 7 tables and 10 Soviet-bloc references.

Card 3/4

The calculation of variable ...

Legend to Fig. 1: Diagram of loading a variable thickness plate with ribs.



Card 4/4

GORSKIY, V.G., inzh.

Investigating the weight of circular ribbed plates. Rasch.na prochn. no.8:97-126 '62. (MIRA 15:8)
(Elastic plates and shells)

GORSKIY, V.G.

Calcultaion of hollow cylinders subjected to the action of axisymmetric tangential loads. Rasch. na prochn. no.9: 82-132 '63 (MIRA 16:12)

GORSKIY, V.M.

Effect of injurious factors on Paramecium caudatum in relation to the density of its population. TSitologiia 4 no.3:353-358 My-Je '62. (MIRA 16:3)

1. Daugavpilsskiy pedagogicheskiy institut.
(PARAMECIUM) (ANIMAL POPULATIONS)

VINOGRAD, M.I., kand.tekhn.nauk; GONCHARENKO, M.S., inzh. [deceased]; DORONIN, V.M., inzh.; TOPILIN, V.V., inzh.; CHERNINA, B.G., inzh.; Prinimali uchastiye: SHEYN, A.S., kand.tekhn.nauk; GORSKIY, V.N., inzh.; ARKHIPOVA, V.P., inzh.; LAGUNTSOVA, Ye.V., inzh.; KISELEVA, S.A., inzh; RYBAKOVA, V. Ya.,inzh.; BYSTRIKOVA, I.N., tekhnik; BURDYUCHKINA, Ye.P., tekhnik; SOLODIKHIN, I.P., tekhnik.

Improving the process of making EI347 steel for bearings. Stal' 21 no.6:543-546 Je '61. (MIRA 14:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii i zavod "Elektrostal'".
(Bearing metals)

3(0)
AUTHOR: Gorskiy, V. P. SOV/20-124-2-40/71

TITLE: A Contribution to the Problem of the Stratigraphy and Tectonic Geology of the Chelyabinsk Brown Coal Basin (K voprosu o stratigrafii i tektonike Chelyabinskogo burougol'nogo basseyna)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 2, pp 383-386 (USSR)

ABSTRACT: Investigations of the Chelyabinsk basin taking many years several stratigraphic and tectonic schemes were suggested. They are deviating considerably from one another. Until quite recently most of the geologists (according to M. M. Prigorovskiy, Ref 1) thought that the Chelyabinsk-basin is confined both in the west and in the east by shifts or rupture zones partly formed before the coal formation. Their final configuration, however, took place after the coal deposition. Thus, they developed also during the latter. In 1947 Preobrazhenskiy found (Ref 2) that the basin is not confined by shifts but by overthrusts. At the same time it was suggested (Ref 3) that the coal-bearing masses in the western and eastern synclinal are completely different as to their structure. They are said to have been separated during the coal formation by an axial

Card 1/3

anticlinal. The data obtained by deep borings call for a revision of the views hitherto accepted regarding the stratigraphy and tectonics of the basin. It becomes ever clearer that the western and eastern stratum of the productive coal sediments do not belong to the same but to two different suites. The differences of the chip size of the clastic rocks and an abrupt transition between such rocks east and west of the basin (Refs 4, 5), as well as the results of the spore analysis (Ref 6) can now be best interpreted if it is assumed that two coal-bearing suites of different age are given here. This is confirmed by several facts. In the section of the rhetic-liassic sediments of the Chelyabinsk-basin 4 suites can be distinguished (from below upwards): 1) Kamyshinskaya, 2) Klyuchevskaya (both the designations are rather clumsy), 3) Chumlyakskaya and 4) Korkinskaya. They are indicative of 2 cycles of the sedimentation. This scheme was suggested by the author in 1956 and confirmed by Ye. A. Kareva (Vsesoyuznyy nauchno-issledovatel'skiy geologo-razvedochnyy neftyanoy institut = All-Union Scientific Research Institute for Petroleum Geological Prospecting).

SOV/20-124-2-40/71

A Contribution to the Problem of the Stratigraphy and Tectonic Geology of the Chelyabinsk Brown Coal Basin

The conference dealing with the unification of the stratigraphic schemes of the Ural (in Sverdlovsk, in 1956) has approved one scheme that is divergent from the above and may lead to wrong ideas. The previously distinguished brachyanticlinal structures must be revised to a considerable extent. The synclinal structure of Chelyabinsk was formed at the same time as the deposition of the rhetic-liassic mass. This structure was disturbed by a marginal overthrust from the west. The dislocation of the rhetic-liassic mass took place later - in the late Jurassic or in the early Cretaceous time. Small shifts took place in the Paleogene as well. There are 7 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut (All-Union Scientific Research Institute of Geology)

PRESENTED: June 26, 1958, by D. V. Nalivkin, Academician

SUBMITTED: June 26, 1958

Card 3/3

GORSKIY, V.P.

Permian and Triassic of the right bank of the middle Pechora River. (MIRA 14:6)
Mat.VSEGEI.Ob.ser. no.28:111-120 '60.
(Pechora Valley--Geology, Stratigraphic)

GORSKIY, V.P.

Triassic sediments in the northern cis-Ural trough. Trudy VNIGRI no.29:50-60 vol. 1 '60. (MIRA 14:7)
(Ural Mountain region--Geology, Stratigraphic)

GORSKIY, V.P.

Recent data on Triassic deposits of the Pechora Depression. Dokl.AN SSSR 133 no.4:909-912 Ag '60. (MIRA 13:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut. Predstavleno akademikom A.L.Yanshinym.
(Pechora Valley--Geology, Stratigraphic)

L'VOV, K.A.; POPOVICH, N.I.; SERGIYEVSKIY, V.M.; KONDIAYN, O.A.; SPEPANOV, D.L.; GORSKIY, V.P.; BOYTSOVA, Ye.P.; BOGRETSOVA, T.B.; GORSKIY, I.I., otv. red.; YEVSEYEV, K.P., otv. red.; KRASNOV, I.I., red.; POKROVSKAYA, I.M., red.; DERZHAVINA, N.G., red.izd-va; GUROVA, O.A., tekhn. red.

[Resolutions of the Interdepartmental Conference on Working out of Unified Stratigraphic Schemes for the Urals] Resheniia mezhvedomstvennogo soveshchaniia po razrabotke unifitsirovannykh stratigraficheskikh skhem dlia Urala. Rassmotreno i utverzhdeno Mezhvedomstvennym stratigraficheskim komitetom 9 fevralia 1960 g. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr, 1961. 50 p. (MIRA 15:2)

1. Soveshchaniye po unifikatsii stratigraficheskikh skhem Urala i po sootnosheniyu drevnikh svit Urala i Russkoy platformy, Sverdlovsk, 1956.
(Ural Mountains—Geology, Stratigraphic)

GORSKIY, V.P.; GRAMMATCHIKOVA, Ye.A.

New data on the stratigraphy of Devonian sediments in the Chernysheva Ridge of the Polar Urals. Inform.sbor. VSEGEI no.43:27-30 '61. (MIRA 14:12)
(Chernysheva Ridge--Geology, Stratigraphic)

GORSKIY, V.P.

Basic characteristics of the tectonics of the northern part of the Turgay trough. Inform.sbor. VSEGEI no.16:13-22 '59. (MIRA 15:3)

(Turgay gates--Geology, Structural)

GORSKIY, V.P.

Correlation of Permian sediments in the Kama Valley portion of the Ural Mountain region. Mat. VSEGEI no.67:59-81 '61. (MIRA 15:12)

(Kama Valley—Geology, Stratigraphic)
(Pechora Basin—Geology, Stratigraphic)

GORSKIY, V.P.; GRAMMATCHIKOVA, Ye.A.

Importance of Carboniferous calcareous breccia and for the study of the tectonic development of the Western Ural trough. Mat. VSEGEI no.67:101-105 '61. (MIRA 15:12)
(Pechora Valley—Breccia)
(Pechora Valley—Geology, Structural)

GORSKIY, V.P.

Characteristics of the distribution of Paleozoic geological formations in the cis-Ural piedmont fault. Trudy VSEGEI 86:34-50 '62.

GORSKIY, V.V.

ROMANOV, M.I.; GORSKIY, V.V.

Application and design of autoexciting electric-machine amplifiers. (MLRA 8:3)
Sbor.nauch.rab.Mekh.inst. no.3:15-44 '52.
(Rotating amplifiers) (Boosters, Electric)

GORSKIY, V. V.

"A Theoretical and Experimental Investigation of Frequency Control of an Electric Drive With an Induction Motor." Cand Tech Sci, Inst of Automatics and Telemechanics, Acad Sci USSR, 23 Dec 54. (VM, 13 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: SUM No. 556, 24 Jun 55 .

GORSKIY, V.V.

AID P - 4138

Subject : USSR/Electricity

Card 1/2 Pub. 27 - 25/33

Author : Gorskiy, V. V., Kand. Tech. Sci.

Title : Conference on the a-c automatized electric drive. (Current events).

Periodical : Elektrichestvo, 12, 75-76, D 1955

Abstract : In May, 1955, a conference organized by the Institute of Automation of the Academy of Sciences, USSR, and the Institute of Power Engineering im. Molotov was held in Moscow. The program concerned the automation of the a-c electric drive and was attended by 370 delegates from 22 cities, representing 126 scientific research and planning organizations, industrial establishments and institutions of higher education. Twenty-eight reports and 8 communications were presented. The author gives a summary of discussion and of the conclusions.

AID P - 4138

Elektrichestvo, 12, 75-76, D 1955

Card 2/2 Pub. 27 - 25/33

Institution : None

Submitted : No date

GORSKIY, V.V. (Moskva)

Simple circuit for obtaining voltage proportional to the square of the velocity of rotation. Avtom. i telem. 17 no.10:941-942 O '56. (MLRA 9:11)

(Voltage regulators)

PA - 2189

AUTHOR GORSKIY, V.V.

TITLE On Electromagnetic Transition Processes in an Asynchronous Motor in the Case of Varying Frequency and Voltage (Elektromagnitnyye perekhodnyye prozessy v asinkhronnom dvigatele pri izmenyayushchikhsya chastote i napryazhenii).

PERIODICAL Izvestiia Akad.Nauk SSSR, Otdel.Tekhn., 1957, Nr 1, pp 39-43 (U.S.S.R.)

Received 3/1957 Reviewed 4/1957

ABSTRACT The electromagnetic transition process, which occurs on the occasion of the starting of an asynchronous motor by means of quietly increasing frequency and voltage, is examined and an approximated method for the computation of frequency and voltage, which vary according to time, is given. First, the basic equations and the theorems are set up, after which a solution of these equations is found in an immobile coordinate system. In the same manner the solution is shown in a rotating coordinate system. Moments, currents, and "Stromverkettungen" are computed by means of a special function Y. This made the precision determination of the character of the modification of the electromagnetic moment possible. On the basis of this precise determination it was then possible to explain the fact that in the case of the starting of the motor by means of a rapid increase of frequency and voltage a fluctuation of the velocity with respect to the mean value occurs. (1 illustration)

Card 1/2

PA - 2189

On Electromagnetic Transition Processes in an Asynchronous Motor in the Case of Varying Frequency and Voltage.

ASSOCIATION Not given
PRESENTED BY
SUBMITTED 16. 12. 1955
AVAILABLE Library of Congress

Card 2/2

GOR'SKIY, V.V., kandidat tekhnicheskikh nauk.

Conference on over-all mechanization and automation in machinery manufacturing. Elektrichestvo no.1:92-93 Ja '57. (MLRA 10:2)

1. Institut avtomatiki i telemekhaniki AN SSSR.
(Automatic control) (Machinery industry)

GORSKIY, V.V., insh.

Calculating inclined cross sections of reinforced concrete elements according to NiTU 123-55. [Suggested by V.V. Gorskii]. Opyt rab. proekt. org. no.2:24-32 '57. (MIRA 11:6)

(Girders)

GORSKIY, V.V., kandidat tekhnicheskikh nauk.

Approximating the mechanical characteristics of induction motors.
Elektrichestvo no.3:14-16 Mr '57. (MLRA 10:4)

1. Institut avtomatiki i telemekhaniki Akademii nauk SSSR.
(Electric motors, Induction)

24-7-2/28

AUTHOR: Gorskiy, V. V. (Moscow).

TITLE: Transient process in a resonance circuit on switching on an e.m.f. with a linearly varying amplitude and frequency. (Perekhodnyy protsess v rezonansnom konture pri vklyuchenii e.d.s. s lineyno izmenyayushchimisya amplitudoy i chastotoy).

PERIODICAL: "Izvestiya Akademii Nauk, Otdeleniye Tekhnicheskikh Nauk" (Bulletin of the Ac.Sc., Technical Sciences Section), 1957, No.7, pp. 8-13 (U.S.S.R.)

ABSTRACT: In a number of branches of science and engineering it is necessary to study non-steady state processes in systems in which there is the action of an external force with a varying amplitude and frequency or with a varying frequency and a constant amplitude. Of such processes Kazovskiy, Ye. Ya. (1) investigated the phenomena during starting and stopping of machines, the author of this paper (2) investigated the transient phenomena during frequency starting of asynchronous motors, Kharkevich, A.A. (3) and Hok, G.(4) investigated phenomena pertaining to spectral analysis etc. In literature the behaviour was studied most fully of those linear resonance systems which are subjected to the effect of an external force with a linearly varying frequency, whilst transient processes

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Transient process in a resonance circuit on switching on an e.m.f. with a linearly varying amplitude and frequency. (Cont.)

during simultaneous variations of the amplitude and frequency have been inadequately studied. The aim of this paper was to study theoretically and experimentally the transient process in an electric resonance circuit which is subjected to the effect of an e.m.f. with a linearly varying amplitude and frequency. The source of such an e.m.f. can be, for instance, a synchronous alternator which is started with a constant acceleration. The analysed electric circuit consists of a resistance, inductance and a capacitance connected in series. The experiments consisted of studying the transient processes during the starting up of a synchronous three-phase alternator with permanent magnets in the rotor; the load consisted of C, L, R series connected in the individual phases which were then joined in star connection. Two oscillograms are given of the current intensity, the terminal voltage and the rotation speed; the current amplitudes in relative units during resonance were 0.17 and 0.225 respectively. It was found that, after passage of the current through resonance, oscillations occur at beat frequencies which differ

Transient process in a resonance circuit on switching on an e.m.f. with a linearly varying amplitude and frequency. (Cont.)

considerably from the harmonic frequencies. A numerical example is included of calculation of the transient process from an oscillogram shown in Fig.3a, whereby the assumed average speed of increase in the frequency was 3600 c.p.s. Calculation of the current intensity is based on eq.(5) for a single-phase of the system, assuming zero initial conditions in the circuit as well as for the e.m.f. Comparison of the calculated and the experimentally determined current intensity curves for the given case shows that the general character of the changes in the current intensity is practically equivalent in both cases. There are 6 figures and 9 references, 6 of which are Slavic.

3/3

SUBMITTED: December 3, 1956.

AVAILABLE:

GORSKIY, V. V.

103-7-20/21

AUTHOR GORSKIY, V.V., (Moscow)

TITLE The Three-Phase Magnetic Amplifier.
(Trekhfaznyy magnitnyy usilitel' - Russian)

PERIODICAL Avtomatika i Telemekhanika, 1957, Vol 18, Nr 7, pp 681-685.
(U.S.S.R.)

ABSTRACT The method of operation, the construction and some results of experimental investigations are given. On account of the latter the following may be said: 1) The TMA (three-phase magnetic amplifier) is characterized by its rigidity and small measurements. 2) The power-amplifying coefficient of the TMA is essentially greater than a control winding, which has the measurements of the control winding of an ordinary one-phase magnetic amplifier, acts on all three phases at the same time. 3) The consumption of magnetic material is 20-30% less than with systems which consist of three one-phase amplifiers. This results from the well-known relation of the weights ofa three-phase transformer and three one-phase transformers. The discontinuous voltage drop at the windings of the B phase as well as of the A- and C phases. In the case of a symmetric load this does, however, notexercize any influence on the symmetry of the linear as well as of the phase voltage at the load terminals. Further investigations will show to what extent the discontinuous voltage drop is an essential disadvantage.

Card 1/2

The Three-Phase-Magnetic Amplifier.

103-7-10/11

(With 9 illustrations and 1 Slavic reference).

ASSOCIATION Not given.
PRESENTED BY
SUBMITTED 6.10.1956.
AVAILABLE Library of Congress.
Card 2/2

GORSKIY, V. V.

AUTHOR: Gorskiy, V. V. (Moscow) 24-9-33/33

TITLE: On investigating the dynamic resolution power of a resonator in successive analysis. (K issledovaniyu dinamicheskoy razreshayushchey sposobnosti rezonatora pri posledovatel'nom analize).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1957, No.9, pp. 167-168 (USSR)

ABSTRACT: Analytical investigation of the dynamic resolution ability of a resonator in the case of successive analysis, i.e. when changing either the tuning of the resonator or the excitation frequency, the final expression of the envelope curve of the transient process contains non-tabulated functions of Se(m,v) and Ce(m,v) which in their structure are similar to Fresnel integrals. Since Tables were published in the Soviet Union (Ref.2) of the function:

$$W(z) = e^{-z^2} \int_0^z e^{x^2}\, dx$$

of the complex variable z, this problem can be solved using these published tables and according to the here derived formulae the envelope curve is expressed by the

Card 1/2

24-9-33/33

On investigating the dynamic resolution power of a resonator in successive analysis.

following relation:

$$\xi = \sqrt{a^2 + b^2}$$

There are three Slavic references.

SUBMITTED: June 5, 1957.

AVAILABLE: Library of Congress.

Card 2/2

GORSKIY, V.V.

103-9-2/9

AUTHOR Gorskiy, V.V., (Moscow)

TITLE A Relay System for Automatic Position Control with a Compound Motor. (Releynaya sistema avtomaticheskogo regulirovaniya polozheniya s kompaundnym dvigatelem.-Russian)

PERIODICAL Avtomatika i Telemekhanika, 1957, Vol 18, Nr 9, pp 781-791 (U.S.S.R.)

ABSTRACT The author is of the opinion that, when working out optimum systems, it is necessary not only to introduce internal nonlinear feedbacks, in which case the system remains unchanged, but also to make a proper selection and to see to a maximum utilization ofall properties of the individual system elements. Such a way leading to an increase of the rapidity of effect of relay systems with D-C servomotors (acting D-C motors) can, according to the author's opinion, be the use of direct current motors with a mixed system of excitation (compound motors). The series-wound excitation winding leads to a considerable increase of the starting moment of the motor and therefore also to a reduction of the time needed for starting. Such a system is investigated here, and starting of the motor is dealt with in consideration of the saturation of its magnetic circuit. In order to obtain greater accuracy in working off the input effect, and in order that no excessive regulation takes place, a nonlinear rapid feedback is introduced, the shape of which is determined; It is shown that the use of direct current motors with mixed excitation in relay systems with automatic position control leads to a considerable reduction of the time needed for the system to start opera-

Card 1/2

Gorskiy, V.V.

8(2); 28(1) PHASE I BOOK EXPLOITATION SOV/1433

Soveshchaniye po avtomatizirovannomu elektroprivodu peremennogo toka, Moscow, 1955

Trudy... (Transactions of the Conference on Automated A-C Electric Drives) Moscow, Izd-vo AN SSSR, 1958. 398 p. 4,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Resp. Eds: V.S. Kulebakin, Academician, and M.G. Chilikin, Doctor of Technical Sciences, Professor; Ed. of Publishing House: D.M. Ioffe; Tech. Ed.: I.P. Kuz'min.

COVERAGE: The conference was organized on the initiative of the Institute of Automation and Telemechanics of the Academy of Sciences, USSR, and the Moscow Power Engineering Institute and had as its aim the planning of the most progressive ways of developing automatic control of electric drives. The first conference on the subject of automated electric drive took place more than ten years before the present one and was concerned with d-c electric drives. The results of this conference were found to be most valuable in the task of rebuilding postwar Soviet industry and in furthering industrial development. Present technical development of Soviet industry demands high speeds, simplicity of construction, reliability of operation, and economy. The squirrel-cage induction motor with frequency control appears to be the most promising type of controlled a-c drive. For wide application of this drive in the Soviet economy there is a need of developing new types of frequency converters. Some interesting studies were made in this connection at the Institute of Automation and Telemechanics of the USSR Academy of Sciences and its Leningrad branch, at the Moscow Power Engineering Institute, the Central Design Bureau of the "Elektroprivod Plant, the State Design Institute of the Ministry of Construction of the RSFSR, and in other design organizations. These studies were discussed at the present conference. The transactions contain material concerning the theory and design of reactor, pulse, and frequency methods of controlling a-c electric drives. Kokorev participated in the preparation of this collection of papers. The volume was reviewed by Professor Ya. V. Mitusov, Doctor of Technical Sciences. Some of the papers include a bibliography.

TABLE OF CONTENTS:

AUTHOR: Gorskiy, V. V. (Moscow) 103-19-5-6/14

TITLE: An Electro-Mechanical Computing Device (Elektromashinnoye vychislitel'noye ustroystvo)

PERIODICAL: Avtomatika i Telemekhanika, 1958, Vol. 19, Nr 5, pp. 446-455 (USSR)

ABSTRACT: The description and the mode of operation of the electromechanical computing device suggested by the author is given here+). Some results of the experimental investigation of the simplest variant of such a device are shown. With the aid of this variant it is possible to determine the curves of Mikhaylov, the reciprocal amplitude-phase-characterics of one-circuit-systems, the limits of the division of domains according to the factor of amplification, to perform functional transformations of high-speed feedback and to find the real roots of algebraic equations. The device described here is sufficiently simple in its construction. The preliminary tests with a channel of this device confirmed the possibility to construct computing devices on this principle. Examples are given in order to

Card 1/2

illustrate the calculations. They show an accuracy acceptable for technical computations. These computations and diagrams were performed by R. F. Shepenina and Ye. A. Borisova. The model of the device was constructed by N. I. Karmatskiy.+) The principle of the mode of operation of the device is based upon the properties of alternators for the production of a voltage the amount of which is dependent on the frequency (rotational speed) and the current intensity of the excitation, as well as upon the frequency properties of electrically idle components (of capacity and inductivity) which are fed by the alternators.
There are 8 figures and 5 references, all of which are Soviet.

SUBMITTED: May 28, 1957

AVAILABLE: Library of Congress

Card 2/2 1. Mathematical computers—Design 2. Mathematical computers —Operation 3. Mathematical computers—Applications

GORSKIY, V.V., kand. tekhn. nauk.

Approximation of the mechanical characteristics of asynchronous motors during frequency starting. Trudy MIIT no.95:96-104 '58. (MIRA 11:12)

(Electric motors, Induction)

18.7200
~~18(7)~~

67862

SOV/125-60-1-5/18

AUTHOR: Gorskiy, V.V. and Babkin, L.T. (Moscow)

TITLE: An Investigation Into the Process of Roller Welding Thin-Sheet Stainless "1Kh19N9T" Steel

PERIODICAL: Avtomaticheskaya svarka, 1960, Nr 1, pp 38-45 (USSR)

ABSTRACT: An investigation was undertaken to find a reliable parameter for checking the quality of a weld during the welding process. The value of the welding, the amount of electrical energy used from the network or fed to the welding machine electrodes, and the thermal expansion of metal in the welding contact were chosen as possible parameters. Experiments were conducted to ascertain which of the three best determines the quality of the welded point. The experiments and the experimental machine MShM-50 (Figure 1) are described in detail. The machine includes an ignitron interrupter. The basic parameters of the process were registered by an MPO-2

Card 1/3

An Investigation Into the Process of Roller Welding Thin-Sheet Stainless "1Kh19N9T" Steel

oscillograph with a resistance and shunt-box (type P1). A special device was developed for feeding the bridge with a high-frequency current (4,600 cycles) and for increasing the voltage taken from the bridge's measuring diagonal. A detailed description of this device and the measures taken to counteract interference from the magnetic fields of the welding current will be published in a separate article. It was concluded: 1) That heat expansion of metal in the welding contact is the suitable check parameter; 2) That energy liberated in the welding contact is an inadequate test of the quality of the joint; 3) That current and voltage-drop in the welding contact are not directly related to the depth of fusion; 4) That the resistance of the welding contact cannot be considered a reliable check parameter for the quality of the joint. There are 1 diagram, 1 oscillogram, 5 graphs, and 18 refer-

67862
SOV/125-60-1-5/18

An Investigation Into the Process of Roller Welding Thin-Sheet Stainless "1Kh19N9T" Steel

ences, of which 11 are Soviet, 5 English, 1 Slovak, and 1 Japanese. 4

SUBMITTED: May 25, 1959

Card 3/3

S/125/60/000/010/012/015
A161/A133

1.2300

AUTHORS: Gorskiy, V.V., and Babkin, L.T. (Moscow)

TITLE: A Device Measuring the Thermal Expansion of Metal in Roller Welding

PERIODICAL: Avtomaticheskaya svarka, 1960, No. 10, pp. 72-81

TEXT: The article gives a detailed description of a new device measuring the thermal expansion of metal between contact welding rollers. Its indications show the quality of the formed weld. The device (Fig.1) consists of bellows-sealed chamber (1), hydraulic cylinder (2), differential induction pickup (3) and electromagnet (4). The chamber bottom is soldered to base (5) connecting the device with the mobile roller of the welding machine (Fig.2), and its top to the hydraulic cylinder. The chamber and the cylinder are filled with oil to the level shown by the dotted line. A hollow piston (6) moves in the cylinder. The top and bottom cylinder spaces are connected by a by-pass duct (7). Piston rod (8) carries armature (9) of the electromagnet (4) and armature (10) of pickup (3), which are both placed in housing (11) screwed to the cylinder. Ring (12) changes the position of the magnetic conductors of

Card 1/9

S/125/60/000/010/012/015
A161/A133

A Device Measuring the Thermal Expansion of Metal in Roller Welding

the pickup in relation to the armature. Pins (13) on insulating disks (14) are conducting current to the windings of the magnet and the pickup. The electric circuit is shown in Fig.2. The electromagnet winding is connected to the circuit of the [illegible]6 (L6) thyratron of the multivibrator of the [illegible] (PISh) ignitron controller described in Ref.2. The L6 thyratron is open in the intervals between the welding cycles, and armature (9) fixes the start of the reading. When the interval is over, the L6 thyratron extinguishes and the electromagnet releases the armature, and with it the whole mobile part of the measuring device. The [illegible]7 (L7) thyratron ignites at the same time, and current flows into the welding circuit of the machine. The windings of the induction pickup form the arms of a bridge (M) that is fed from a tube generator (1,100 cps, 18 v). Electronic amplifier (4) amplifies the voltage transmitted to an [illegible]-2 (MPO-2) oscillograph. Fusing metal expands between the rollers, and the upper roller and base (5) rise. Armature (10) moves off zero and unbalances the bridge. The voltage on the amplifier output is in proportion with the displacement of the upper roller. The hollow piston is made of duralumin, the two armatures of 0.35 mm transformer steel, and the

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weight of the piston rod and armature only slightly exceeds the weight of the oil displaced by the piston in cylinder (2). Thus, the mobile system reproduces accurately the oil volume changes in the chamber at fast displacements of the rollers. A mobile electrode with built-in measuring device is illustrated (Fig.3). The device is placed inside hollow slider (16). Base (5), bus bar (17) and supporting half-fork (18) of the upper roller are attached to the flange of the slider. Eight roller bearing supports (not shown in Fig.3) reduce the friction of the slider on casing (23). Spring (27) is the resilient element transmitting fast displacements of roller (19) from thermal expansion of the metal. Tubes welded with overlap joint are installed on mandrel (22). Three recorded oscillograms are shown (Fig.4). It is mentioned that D.S. Balkovets (Ref.4) and Yu.A. Pachentsev (Ref.5) have proved that the thermal expansion of metal in spot welding contact is a dependable means for quality inspection, but objections were made (Ref.6) against its practical application. The authors found that when 0.1 to 0.5 mm thick stainless steel is welded by rollers, the cast core forming in the weld at a welding speed below 0.3 m/min and intervals over 0.1 sec is the same as

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in spot welding. The following conclusions were drawn: 1) The device is simple, and it measures the spreading of welding rollers with an accuracy not below $(3 \div 5)10^{-3}$ mm. 2) When 0.1-0.5 mm stainless steel is welded by rollers, the metal in contact heats and then partially cools down, as if it were "breathing" in beat with the half-cycles of the welding current. 3) At welding speeds below 0.4 m/min the liquid metal does not shift any considerable distance toward the ready welded seam portion. The rollers spread slightly less than in spot welding. 4) When the metal thickness is reduced from 0.5 mm to 0.1 mm, the ratio of the maximum signal (corresponding 45-55% fusion depth) to the minimum (non-fusion) is 1.4-1.5 and remains constant. 5) When the tube diameter diminishes and the wall thickness remains the same, the spreading of the rollers decreases when the fusion depth does not change. 6) Irregularities of the welding process can be recorded, i.e., a drop of the network voltage, gaps in breaker ignitron, resistance variations in the machine circuit, pressure variations between the rollers, changed roller surface width, etc. 7) An automatic control system for roller welding process can be designed using the thermal expansion of metal in the welding contact

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for the controlled parameter. There are 10 figures and 8 Soviet-bloc references.

SUBMITTED: April 20, 1960

Card 5/9

GORSKIY, V.V.; SYROMYATNIKOVA, O.G., red.

[Safety engineering manual for electricians using SMP-1 concrete puncturing pistols] Pamiatka po tekhnike bezopasnosti dlia elektromontazhnikov, rabotaiushchikh so stroitel'no-montazhnym pistoletom SMP-1. Moskva, Gos.energ.izd-vo, 1961. 20 p. (MIRA 14:11)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye po proizvodstvu elektromontazhnykh rabot.
(Concrete construction—Equipment and supplies)

GORSKIY, Vyacheslav Vyacheslavovich; SOSNOVSKAYA, G.I., red.; LEUSHCHENKO, N.L., tekhn. red.

[Design of reinforced concrete structures subject to torsional forces] Proektirovanie zhelezobetonnykh konstruktsii, podverzhennykh kruchen'iu. Kiev, Gos.izd-vo lit-ry po stroit. i arkhit. USSR, 1961. 139 p. (MIRA 15:4)
(Reinforced concrete construction)

38116
S/125/62/000/006/006/013
D040/D113

1.2000

AUTHORS: Babkin, L.T., and Gorskiy, V.V. (Moscow)

TITLE Automatic control system for resistance welding

PERIODICAL: Avtomaticheskaya svarka, no. 6, 1962, 39-47

TEXT In the described system for automatic resistance seam welding of 0.2-1.0 mm thick stainless steel, the thermal expansion of the metal in contact serves as controlling parameter. The device measuring the expansion, i. e. the spreading of the contact rollers, was invented by the authors and A.A. Gusev (Author's Certificate no. 130233, "Byulleten' izobreteniy", no. 14, 1960). The system's main components are a programming unit, an ignitron contactor connecting the primary winding of the welding transformer to the electric network, a unit for setting the welding pulse and interval time, a tube generator supplying current to a measuring unit which transforms the spreading of rollers into electric voltage, an amplifier on the output of this unit, a peak detector detecting the output voltage from the amplifier output and feeding it to a unit which subtracts it from the voltage of

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S/125/62/000/006/006/013
D040/D113

Automatic control .....

the programmer. The system is illustrated by block and circuit diagrams, and the operation of each component is described in detail. Welding current is instantaneously switched off when liquid metal splashes out, or an intolerably high error is signalled. Welded seams remain continuous, with only a very small depth of fusion, when the pressure varies by 2.5 times, the roller width varies by 1.5-1.7 times, the voltage drops by 80-100 v, etc. There are 10 figures.

SUBMITTED: April 1, 1961

Card 2/2

GORSKIY, Vyacheslav Vladimirovich; GAVRILOV, N.S., red.; BORUKOV, N.I., tekhn. red.

[What an electrician should know about electric equipment installation operations] Chto nuzhno znat' elektroslesariu pri elektromontazhnykh rabotakh. Moskva, Gosenergoizdat, 1963. 60 p. (Biblioteka elektromontera, no.100) (MIRA 16:10)

(Electric wiring)
(Electric apparatus and appliances)

ACCESSION NR: AP4038765 S/0048/64/028/005/0801/0804

AUTHOR: Blokhin, M.A.; Shuvayev, A.T.; Gorskiy, V.V.

TITLE: X-Ray spectroscopic investigations of chemical bonds in sulfur compounds /Report, Seventh Conference on X-Ray Spectroscopy held in Yerevan 23 Sep-1 Oct 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.5, 1964, 801-804

TOPIC TAGS: x-ray spectrum, line shift, sulfur, sulfur compound, chemical bond

ABSTRACT: According to A.T.Shuvayev (Izv.AN SSSR,Ser.fiz.28,758,1964 /see Abstract AP4038758/) the shift of the Kα lines of sulfur (and other Period 2 elements) in chemical compounds is due to the charge on the atom arising from the influence of the neighboring atoms. This phenomenon is discussed at some length for the case of sulfur, and a short table is presented, based on data in the literature, showing the shifts produced by various chemical bonds and bond configurations. These chemical bond shifts of the S Kα lines are believed to be approximately additive. The Kα fluorescence spectra of S in several compounds were recorded. The spectra were excited by 20 kV Cu bremsstrahlung and formed by reflection from the (10$\bar{1}$0) planes of bent (R = 50 cm) quartz crystal. The temperature of the samples did not exceed

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ACCESSION NR: AP4038765

50°C. The shifts of the KX lines were measured with respect to their position in rhombic sulfur. The shifts obtained for the compounds H_7C_7-S-S-C_7H_7 and S = $= C(N(CH_3)_2)_2$ were 0 and -0.13 eV, respectively, and are in accord with the structures as written. A shift of -0.02 eV was observed for methylene blue; of the two structures proposed for this compound, the x-ray data favor that in wich the chlorine is attached to one of the nitrogen atoms and not to the sulfur. The polymer $(CuS_2N_4C_{24}H_{18})_n$ showed a shift of -0.06 eV; from this it is concluded that the S-C bond is single. Three compounds containing the SCN group were investigated: KSCN, CuSCN and $NH_2C_6H_4SCN$, for which the KX aline shifts were -0.10, 0 and 0.07 eV, respectively. These data favor the structure -S-C ≡ N for the SCN group in the aniline derivative and the copper salt, and a structure between this and $-S=C=N^-$ in KSCN. It is concluded that x-ray spectroscopy can be a useful tool for investigating chemical bonds. "The authors are grateful to Z.V.Zvonkova (Physical-chemical Institute im.L.YA.Karpov) and I.G.Mochalina (Special Organic Synthesis Laboratory of the Moscow State University) for preparing the samples." Orig.art.has: 3 tables.

Card 2/3

ACCESSION NR: AP4038765

ASSOCIATION: Rostovskiy-na-Donu gosudarstvenny*y universitet (Rostov-on-the-Don State University)

SUBMITTED: 00 DATE ACQ: 12Jun64 ENCL: 00

SUB CODE: OP, GC NR REF SOV: 003 OTHER: 002

Card 3/3

ACCESSION NR: AP4038770 S/0048/64/028/005/0823/0824

AUTHOR: Shuvayev, A.T.; Zy*ryanov, V.G.; Gorskiy, V.V.

TITLE: Investigation of the K fluorescence spectrum of calcium in several compounds /Report, Seventh Conference on X-Ray Spectroscopy held in Yerevan 23 Sep to 1 Oct 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.5, 1964, 823-824

TOPIC TAGS: x-ray spectrum, calcium compound, line shift, line shape

ABSTRACT: The calcium $K\alpha_{1,2}$, $K\beta_1$, and $K\beta_5$ lines in the spectra of CaC_2, CaO and CaF_2 were recorded in order to detect the influence of the calcium ion charge and the surrounding atoms on the spectra. The spectra were excited by the radiation from a 30 kV copper anode x-ray tube and were recorded photographically in the second order using a best quartz crystal vacuum spectrometer with a resolution of 10 000. Relative intensity measurements of the $K\beta_1$ and $K\beta_5$ lines were facilitated by employing two films, one behind the other; this resulted in a $K\beta_1$ image on the second film comparable in density with the $K\beta_5$ image on the first. No difference in the $K\alpha$ spectra of the three compounds could be discerned. This is in agreement with pre-

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ACCESSION NR: AP4038770

vious calculations (A.T.Shuvayev, Izv.AN SSSR,Ser.fiz.25,986,1961; M.A.Blokhin and A.T.Shuvayev, Ibid.26,429,1962), according to which the s and p valence electrons should not be able appreciably to affect the $K\alpha$ lines. The $K\beta_1$ line in CaF_2 was shifted by 0.4 eV toward the shorter wavelengths compared with its position in CaC_2 and CaO. The presence of this shift is in accord with previous conclusions (loc.cit) but the observed agreement between the positions of $K\beta_1$ in CaC_2 and CaO is not understood. A large shift (2.5 eV) and gross changes in line shape were observed in $K\beta_5$, indicating that the influence on this line of the valence electrons is considerable. Orig.art.has: 1 figures and 2 tables.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvenny*y universitet (Rostov-on-the-Don State University)

SUBMITTED: 00 DATE ACQ: 12Jun64 ENCL: 00

SUB CODE: OP NR REF SOV: 002 OTHER: 000

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L 42207-66 EWP(e)/EWT(m)/EWP(v)/EWP(j)/EWP(t)/ETI JD/WW/JG/RM/WH

ACC NR: AP6014067 SOURCE CODE: UR/0294/66/004/002/0218/0227

AUTHORS: Gorskiy, V. V. (Moscow); Polezhayev, Yu. V. (Moscow)

ORG: none

TITLE: Some characteristics connected with the flow of a film of melt

SOURCE: Teplofizika vysokikh temperatur, v. 4, no. 2, 1966, 218-227

TOPIC TAGS: melting, quartz, fluid viscosity, boundary value problem, specific heat, boundary layer, flow characteristic

ABSTRACT: The steady-state melting of a vitreous material in a high-temperature gas stream is analyzed. A simple approximate calculation method is developed for the vicinity of the critical point and for the lateral surface. The continuity equation and equation of motion of the viscous film of melt are:

$$\frac{\partial}{\partial x}(ru)+\frac{\partial}{\partial y}(rv)=0,$$

$$\frac{\partial}{\partial y}\left(\mu\frac{\partial u}{\partial y}\right)=\frac{\partial p_e}{\partial x}+F_x=P_x(x),$$

where u and v are components of the velocity vector; μ is the coefficient of viscosity; p_e is the pressure at the external boundary of the boundary layer; and F_x are the body forces. The energy equation is:

Card 1/2 UDC: 533.601.16

Fusion of a blunt cone of quartz glass in a hypersonic gas stream showed rapid solidi-

S/143/61/000/011/001/009
D223/D302

AUTHORS: Gorskiy, Ya. M., Engineer, and Ledynakin, D. P., Doctor of Technical Sciences

TITLE: The working of a resynchronizer made on the principle of an electromechanical filter in the case of multiple connections between a generating station and power station

PERIODICAL: Izvestiya vysshikh uchebnykh zavendeniy. Energetika, no. 11, 1961, 5 - 11

TEXT: Reference is made to a previous work by the authors and V. A. Venikov (Ref. 1: Izv. vuzov SSSR - Energetika, no. 12, 1960), where an electromechanical filter was described; its application for complex connections of a generating station with the power system is discussed. The case considered is that of a generating station (represented by an equivalent generator) connected with two parts of a system (represented by two equivalent generators). The output voltages of the filters are derived; the frequencies of

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the output voltages give an indication of the mean slip between the rotors of equivalent generators. Therefore, the output signals in the frequency estimation can be used for control and detection of non-synchronous running of the machines of the system with respect to the generators of the station. The amplitudes of the output signals cannot be used for this purpose. The use of a filter as a transmitter for the measuring unit of a resynchronizer is considered next. The unit can be based on three possible principles: Amplitude-pulse, time-pulse and number-pulse comparison. Circuit diagrams of all three schemes are given and discussed. By the two first methods the magnitude of slip can be found. The measurement by the number-pulse method is made in binary system. The minimum slip which can be measured by a 6-digit counter is 0.8%. There are 4 figures and 5 Soviet-bloc references.

ASSOCIATION: Moskovskiy ordena Lenina energeticheskiy institut (Moscow Order of Lenin Institute of Power Engineering)

SUBMITTED: July 18, 1960

GORSKIY, Ya.Ya.

Luminescence meters and peculiarities in their use in radiometric apparatus. Razved. i prom. geofiz. no.21:101-113 '58.
(Radiometer) (Luminescence) (MIRA 11:10)

GORSKIY, Ya.Ya.

Changes in the design of a high-voltage transformer in the radioactive logging apparatus. Razved i prom. geofiz. no.24: 57-59 '58. (MIRA 11:12)
(Oil well logging, Radiation--Equipment and supplies)

GORSKIY, Ya.Ya.; LUKHMINSKIY, B.Ye.

Reliability of apparatus for radiation well logging. Razved.i prom. geofiz. no.44:130-140 '62. (MIRA 15:7)
(Oil well logging, Radiation--Equipment and supplies)

GORSKIY, Yu. B., Cand Tech Sci -- (diss) "Investigation of the effect of a combustion chamber in the piston on the parameters of the working process of a tractor diesel D-50." Minsk, 1960. 17 pp; (Ministry of Higher and Secondary Specialist Education Belorusskaya SSR, Belorusskiy Polytechnic Inst im I. V. Stalin); 200 copies; price not given; (KL, 25-60, 131)

S/273/63/000/002/008/010
A052/A126

AUTHOR: Gorskiy, Yu.B.

TITLE: Investigation of the effect of the shape of a piston-embedded combustion chamber on the engine economy

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk, 39. Dvigateli vnutrennego sgoraniya, no. 2, 1963, 30, abstract 2.39.223 (Tr. Nauchn. konferentsii. Belorussk. in-t mekhaniz. i elektrifik. s. kh. 1959. Minsk. Gos. isd-vo s.-kh. lit. BSSR, 1961, 338 - 351)

TEXT: A study is described carried out to find the most favorable combustion chamber type, enabling one to achieve minimum fuel consumption at a smooth work of the engine without reducing its service life.

[Abstracter's note: Complete translation]

Card 1/1

GORSKIY, Yu.I., inzh.

Utilizing the work of impact in the erection of embankments of cohesive soil. Gidr. stroi. 32 no.8:30-31 Ag '62. (MIRA 15:9)
(Earthwork)

GORSKIY, Yu.M.

Principles for designing starter circuits for the resynchronization of generators. Nauch. dokl. vys. shkoly; energ. no.1:81-90 '58. (MIRA 11:10)

1.Rekomendovano kafedroy elektricheskikh setey i sistem Moskovskogo energeticheskogo instituta.
(Electric generators)

110-58-6-5/22

AUTHORS: Ivanov-Smolenskiy, A.V., Candidate of Technical Sciences, Gorskiy, Yu.M., Karpov, V.A. and Kovalenko, L.G., Engineers

TITLE: Determination of the Losses in Electrical Machines, Transformers and Reactors by the Retardation ("Run-down" Time) Method, Using a Phase-meter and Slip Recorder (Opredeleniya poter' v elektricheskikh mashinakh, transformatorakh i reaktorakh metodom samotormozheniya s primeneniyem fazometra i registratora skol'zheniya)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Nr 6, pp 26 - 29 (USSR).

ABSTRACT: The article is based on work done in the physical model laboratory of the Moscow Power Institute under the guidance of Doctor of Technical Sciences Professor V.A. Venikov. Retardation testing is a very convenient method of determining the losses in machines and also in transformers and chokes associated with them where these have a low ratio of resistance to reactance. Difficulty is, however, experienced in recording the retardation curves: the usual methods are to use tachometer/time methods, or to use photo-tachometers, which are simpler and more accurate.

The Moscow Power Institute electronic phasemeter can be used in

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Determination of the Losses in Electrical Machines, Transformers and Reactors by the Retardation ("Run-down" Time) Method, Using a Phasemeter and Slip Recorder

making retardation tests. This instrument is based on measurement of the time interval between passages of the measured voltage through the zero value. The change in phase angle can be recorded on an oscillograph as a smooth curve or as a series of impulses, the amplitude of which is proportional to this angle. To make retardation tests, one pair of terminals of the instrument is supplied with voltage from the machine under test and the other from a source of standard frequency. The reading is practically independent of the value of the applied voltage. An oscillogram obtained during a retardation test is shown in Figure 1. The method of calculating the power loss is given. The usual tests are run, that is, without excitation, with excitation but open circuit and with excitation and short-circuited. Losses in transformers and reactors are similarly determined by making retardation tests on a generator which is used to supply the transformer. The accuracy of the results can be determined by making retardation tests when the generator is loaded with known ohmic resistances.

110-58-6-5/22

Determination of the Losses in Electrical Machines, Transformers and Reactors by the Retardation ("Run-down" Time) Method, Using a Phase-meter and Slip Recorder

The physical modelling laboratory of the Moscow Power Institute has developed a portable phasemeter based on semiconductors supplied by pocket batteries; it is illustrated in Figure 2. The instrument is intended for direct measurement of the phase angle between two voltages and to record such changes on an oscillograph. Retardation tests may be made by measuring directly the slip of the generator. Like the previously described method, this is based on comparison with a standard speed. In the laboratory, slip is determined by means of an automatic self-synchronising and re-synchronising device illustrated in Figure 3. An oscillogram of slip during a retardation test is given in Figure 4. The methods described in this article are faster and more accurate than the usual methods.

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110-58-6-5/22

Determination of the Losses in Electrical Machines, Transformers and Reactors by the Retardation ("Run-down" Time) Method, Using a Phasemeter and Slip Recorder

There are 4 figures.

ASSOCIATION: MEI

SUBMITTED: August 10, 1957

Card 4/4 1. Machines--Performance

SOV/110-59-9-13/22

AUTHORS: Gorskiy, Yu.M., and Tikhomirov, V.K. (Engineers)

TITLE: A Magnetic Impulse Method of Recording Torque on the Shafts of Electrical and Other Machines

PERIODICAL: Vestnik elektropromyshlennosti,1959,Nr 9,pp 46-50 (USSR)

ABSTRACT: The torque on an alternator shaft may be recorded by measuring the angle of twist on a section of the shaft between the turbine and generator. Existing strain-gauge, induction and other methods of measuring torque are difficult to apply and subject to error. It is particularly desirable to avoid errors caused by bending and compression of the shaft, also those involved in passing the measurement currents through sliding contact. In these respects the magnetic impulse method offers advantages. The principle of the method consists in measuring the phase displacement between impulses recorded on ferro-magnetic coatings mounted on the shaft at two sections between the turbine and the generator, as illustrated schematically in Fig 1. The impulses are magnetically recorded either directly on the surface of the shaft or on a special disc surfaced with recording material. This method of recording impulses is widely used in computers. The sensitivity of phase-displacement measurements may be increased by using

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A Magnetic Impulse Method of Recording Torque on the Shafts of Electrical and Other Machines

a large number of impulses around the discs. The phase difference between the signals is measured by a triggering circuit to which the amplified impulses are applied. A balancing circuit, shown diagrammatically in Fig 2, is used so that torques of either sign can be measured. The output voltage of the equipment is proportional to the phase displacement, and may be applied either to a voltmeter calibrated in units of torque or to an oscillograph or recording voltmeter. Experimental torque-measuring equipment was applied to a machine of 2.5 kW running at 5000 rpm for which the conditions of measurement were rather difficult. It was first necessary to design a signalling device of special construction, illustrated in Fig 3, consisting of a replaceable calibrated shaft 250 mm long with discs rigidly connected to it. The surfaces of the discs were coated with a recording medium of nickel-cobalt. The diameter of the replaceable shaft was selected according to the torque to be transmitted; three shafts were used, of 6, 8, 10 mm diameter respectively, and the corresponding angles of twist at rated torque were

A Magnetic Impulse Method of Recording Torque on the Shafts of Electrical and Other Machines

3°, 1° and 0.4°. A block circuit diagram of the equipment for recording torque is shown in Fig 4. The operating principles of the circuit are described. The impulses are recorded and read back by a universal magnetic head from a type M-3 computer. Impulse durations of 3-3.5 microseconds and amplitudes of 2-2.5 A were chosen, to suit the recording conditions. For the same reason the auxiliary generator in the apparatus operated at 18 kc/s. Accordingly 110 impulses were recorded on each disc. An integrating device was provided so that rapid changes of torque could be recorded on an electro-magnetic oscillograph, the elements of which have a high natural frequency. An explanation is given of the steps taken to ensure that the output of the instrument depends only on the phase displacement between the recorded impulses and not on the speed of rotation of the machine under investigation. The instrument is calibrated in torque units under steady operating conditions at different loads or by the use of an electromagnetic brake. The accuracy of torque measurements depends mainly on the stability of the supply voltage, the accuracy of the recording device and the drift in the

equipment. If a stabilised supply is used and appropriate corrections are taken, it appears that torque measurements are accurate to within ± 2-3% when measured on a pointer type instrument, and to ± 4-8% when a recorder is used. This is satisfactory for most practical purposes. An oscillogram of torque variations measured during investigations of transient processes in an analogue of a power system are given in Fig 5. The equipment is suitable for use in the laboratory or in the field. The signals may be recorded on powder coatings sprayed on to a ground surface of the shaft, alternatively, for slow machines, recording tape may be stuck on the shaft. All these circuits can employ transistors and this improves the reliability of the device. In applying the magnetic impulse method under operating conditions magnetic screening may be required. There are 5 figures and 3 Soviet references.

VENIKOV, V.A., prof., doktor tekhn.nauk, laureat Leninskoy premii;
GORSKIY, Yu.M., inzh.; LEDYAMKIN, D.P., dotsent, kand.tekhn.nauk

Use of an electromechanical filter in generator re-synchronization systems. Izv. vys. ucheb. zav.; energ. 3 no. 12:1-8 D '60.
(MIRA 14:2)

1. Moskovskiy ordena Lenina energeticheskiy institut.
Predstavlena kafedroy elektricheskikh sistem.
(Electric filters) (Electric generators)

GORSKIY, Yu.M., inzh.; LEDYANKIN, D.P., doktor tekhn.nauk

Problem concerning the operation of a resynchronizer based on the principle of an electromechanical filter in the presence of complex couplings between the generating station and the electric power system. Izv. vys. ucheb. zav.: energ. 4 no.11:5-11 N '61. (MIRA 14:12)

1. Moskovskiy ordena Lenina energeticheskiy institut.
(Electric power distribution) (Electric filters)

GORSKIY, Yu.M., inzh.; MANEVICH, Ye.M., inzh.

Transistorized phase telemetering device with a magnetic attachment.
Elek.sta. 33 no.2:75-83 F '62. (MIRA 15:3)
(Telemetering)

GORSKIY, Yu.M.; TITOV, V.V.

Semiconductor devices for measuring the speed of a crankshaft and the angle of advance or the angle of fuel injection in internal combustion engines. Avt.prom. 27 no.12:25-27 D '61. (MIRA 15:1)

1. Moskovskiy energeticheskiy institut.
(Electronic instruments) (Diesel engines--Testing)

S/196/63/000/001/027/035
E031/E535

AUTHOR: Gorskiy, Yu.M.

TITLE: Special-purpose analog computers with discrete attachments

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.1, 1963, 31, abstract 1E153 (Dokl. na 4-y Mezhvuz. konferentsii po primeneniyu fiz. i matem. modelirovaniya v razlichn. otraslyakh tekhn. Sb.2. (Reports of the 4th Intercollegiate Conference on the Application of Physical and Mathematical Modelling in Various Branches of Technology. Collection 2). Moscow, 1962, 99-111)

TEXT: Special-purpose discrete attachments for extending the usefulness of analog computers in theoretical calculations are considered. Circuits are proposed for discrete integration of an angle, repeated generation of the functions sin δ, cos δ, repeated multiplication and nonlinear transformations of one and two variables. The first two circuits are joined together to form a general block for discrete integration of an angle in which the

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GORSKIY, Yu.M. (Moskva)

Excitation control of synchronous machines using electronic digital computers. Izv. AN SSSR. Energ. i transp. no.6:704-710 N-D '63. (MIRA 17:1)

ACCESSION NR: AP4024447 S/0281/64/000/001/0028/0037

AUTHOR: Gorskiy, Yu. M. (Moscow)

TITLE: Use of the principle of self-adjustment in strongly-excited controllers

SOURCE: AN SSSR. Izv, Energetika i transport, no. 1, 1964, 28-37

TOPIC TAGS: automatic control, self-adjustment, synchronous generator, logical search, self-adjustment criteria, generator stability, generator reliability

ABSTRACT: The feasibility of using automatic adjustment systems in strongly excited automatic control circuits which maintain static stability and provide improved adjustment of dynamic stability for variations of the control system mode, is investigated. As a particular case, the use of self-adjusting systems in problems of excitation control of synchronous generators is investigated. Results indicate, that using a system of automatic adjustment, in principle, it is possible to widen the region of application of strongly exited automatic controllers and to increase the general reliability of electrical equipment. The author comments that at the present time there is not enough data to compare automatic adjustment with other methods to widen the regions of static stability and to increase the general reliability of electrical equipment. However, it is assumed that application of the

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principles of self-adjustment in automatic systems will achieve a strong effect. For practical realization of this trend it is necessary to continue operation, both by determination of the useful limits of automatic adjustment systems, by searching for criteria for self-adjustment, and by constructive exploitation of the same systems.

ASSOCIATION: none

SUBMITTED: 20Mar63 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: SD, IE NO REF SOV: 007 OTHER: 000

Card 2/2

GORSKIY, Yu.M., kand.tekhn.nauk

Ferrite and transistor circuits of resynchronizers and slip meters. Elektrichestvo no.3:26-32 Mr '64. (MIRA 17:4)

1. Moskovskiy energeticheskiy institut.

VENIKOV, V.A., doktor tekhn. nauk, prof., Laureat Leninskoy premii; GORSKIY, Yu.M., kand. tekhn. nauk, nauchnyy sotrudnik; SOLDATKINA, L.A., kand. tekhn. nauk, dotsent; MARKOVICH, I.M., doktor tekhn. nauk; KHOLMSKIY, V.G., prof., doktor tekhn. nauk; TSUKERNIK, L.V., doktor tekhn. nauk;

On N.A. Kartvelishvili's comments "Errors in the determination of the probability of stability disturbance for some dynamic systems." Izv. AN SSSR. Mekh. i mashinostr. no.4:195-200 Jl-Ag '64

1. Zaveduyushchiy kafedroy "Elektricheskiye sistemy" Moskovskogo energeticheskogo instituta (for Venikov).

ACCESSION NR: AP4042062 S/0105/64/000/007/0007/0012

AUTHOR: Gorskiy, Yu. M. (Candidate of technical sciences)

TITLE: Amplitude- and phase-sensitive memory schemes responding to the magnitude and rate-of-change of parameters

SOURCE: Elektrichestvo, no. 7, 1964, 7-12

TOPIC TAGS: electric power system, relay protection, power system relay protection, internal storage relay protection, power system fault protection

ABSTRACT: So far, the relay systems protecting power lines and equipment have been lacking sensitivity to remote and long-arc short-circuits. A new internal-memory protective relay is proposed which, by comparing the present with the averaged preceding information, is capable of discerning between a remote short-circuit and a disturbance due to hunting and asynchronous conditions. The new relay includes function generators, an internal storage which averages and stores info, and amplitude discriminators which detect the actual occurrence of specified logical conditions. The transfer functions of the new relay are given by:

$$F_1 = \frac{k_1}{Tp+1} f_1(y) - f_2(y, z);$$

$$F_2 = \frac{k_1}{Tp+1} f_1(y) - f_2(y, z),$$

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ACCESSION NR: AP4042062

where p = d/dt; k is the gain; T is the storage time constant; y and z are the input parameters. Simplified circuit diagrams of transistorized amplitude-sensitive and phase-sensitive elements are presented. These advantages are claimed: (1) High sensitivity to remote short-circuits drawing a fault current lower than the load current; (2) Insensitivity to asynchronous conditions and hunting without introducing relay-system blocking; (3) Possibility of introducing a current-voltage phase blocking; (4) Insensitivity to breaks in the current and voltage input circuits; (5) Possibility of specifying the sensitivity as a nonlinear function of the current. Orig. art. has: 6 figures and 4 formulas.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power-Engineering Institute)

SUBMITTED: 12Dec63 ENCL: 00

SUB CODE: EE NO REF SOV: 003 OTHER: 000

Card 2/2

GORSKIY, Yu.M.

Principle of the construction of automatic excitation control with strong action using digital computing elements. Trudy MEI no.54:103-121 '64.

Approximation methods for evaluating the resultant stability of electrical systems using probability criteria. Ibid.:129-148 (MIRA 17:12)

ACC NR: AP7002641 (A,N) SOURCE CODE: UR/0413/66/000/023/0187/0187

INVENTOR: Gorskiy, Yu. M.

ORG: None

TITLE: A method for automatic control of an object with respect to *n*-parameters. Class 42, No. 134070

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 23, 1966, 187

TOPIC TAGS: optimal control, automatic control design, mathematic model, dynamic programming

ABSTRACT: This Author's Certificate introduces: 1. A method for automatic control of an object with respect to *n*-parameters. The procedure is based on conversion of information received from this object into optimum control actions by means of a decoder, a programming device and a ferrite matrix memory unit which serves as a model of an *n*-dimensional space. The speed of the control system is increased by using computational methods for finding the optimum reactions of the controlled system for the entire field of probable conditions in *n*-dimensional phase space, e. g. by constructing the optimum operator or by dynamic programming. The resultant data are then fed into the programming device and the signals appearing at the output of this device are used for controlling the actuating elements in conformity with the information fed to the inputs of the *n*-decoders which determines the position of the representative

Card 1/2

GORSKOV, A.

Mechanism of the formation of globular carbide. Tr. from the Russian.
p. 15. KOHASZATI LAPOK (Magyar Banyaszati es Kohaszati Egyesulet)
Budapest. Vol 11, No. 1 Jan. 1956

SOURCE: East European Accessions List (EEAL) Library of Congress
Vol. 5, No. 6, June 1956

GORSKOV, S. I.

PA 41127

USSR/Engineering Jan 1948
Heating, Exhaust Gas
Furnaces - Performance

"Performance of Boiler Recoverers at the Magnitogorsk Metallurgical Combine," S. I. Gorskov, Engr, Magnitogorsk Metallurgical Combine, 1 p

"Stal'" No 1

In 1940 boiler recoverers were installed at Martin furnaces No 1 and 2 of the Magnitogorsk Metallurgical Combine. Operation of these assemblies is most satisfactory as it permits utilization of heat as it goes up the chimney. Thus, instead of wasting, it is used to heat the company offices. At the

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USSR/Engineering (Contd) Jan 1948

same time the performance of the furnaces is improved and in 1946 one of the crews at furnace No 1 was able to exceed its norm by some 5,000 tons.

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GORSKOV, V.; BUDNIKOV, P.

The stability of calciumhydrosulfoaluminate and calciumhydrosulfoferrate. Tr. from the Russian. p. 145.

Magyar Tudomanyos Akademia. Kemiai Tudomanyok Osztalya. KOZLEMENYEI. Budapest, Hungary, Vol. 10, No. 2, 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 7, July 1959
UNCL

GORSKOV, V.A.

Labor productivity reserves in the glass industry. Leg.prom. 7 no.8:7-9 Ag '47. (MLRA 6:11)
(Glass manufacture)

GORSKOV, Vladimir Alekseyevich; PUSHKIN, P.S., kandidat tekhnicheskikh nauk, retsenzent; POLYAK, T.B., kandidat tekhnicheskikh nauk, retsenzent; UTKIN, V.A., retsenzent; PLEMYANNIKOV, M.N., redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Labor management and production norms in the glass industry] Organizatsiia truda i tekhnicheskoe normirovanie v stekol'nom proizvodstve. Moskva, Gos. nauchno-tekhn. izd-vo ministerstva promyshlennykh tovarov shirokogo potrebleniia SSSR, 1954. 354 p. [Microfilm] (MLRA 8:2)
(Glass manufacture) (Industrial management)

GORSKOV, V.A.

Generalisation of advanced work experience in glass container plants by engineer F.Kovalev's method. Leg.prom. 14 no.2:48-51 F '54. (MLRA 7:5)

(Container industry)

GORSKOV, V.A.

KOVTUNENKO, Georgiy Alekseyevich; LYULYUKINA, V.F., retsenzent; GORSKOV, V.A., retsenzent; SOSULINA, V.N., redaktor; EL'KINA, E.M., tekhnicheskiy redaktor.

[Production of high grade pottery] Proizvodstvo sortovoi posudy. Moskva, Gos.nauchno-tekhn.izd-vo Ministerstva tekstil. promyshl. SSSR, 1955. 153 p. (MLRA 8:12)
(Pottery)

GORSKOV, Vladimir Aleksandrovich; ZAGORCHIK, Matvey Mikhaylovich; BOGUSLAVSKIY, A.I., retsenzent; PLEMYANNIKOV, M.N., redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Economics, organization and planning in interprises of the glass industry] Ekonomika, organizatsiia i planirovanie predpriiatii stekol'noi promyshlennosti. Moskva, Gos. nauchno-tekhn. izd-vo Ministerstva legkoi promyshl. SSSR, 1956. 414 p. (MLRA 10:1)
(Glass manufacture)

GORSKOV, V.A. inzhener.

"Conveyor system in the manufacture of fine tableware." V.N.Kudriashova, T.I.Borisova. Reviewed by V.Gorskov. Leg.prom.16 no.2:51-52 F '56. (MLRA 9:7)

(Gusev--Glass manufacture)(Kudriashova, V.N.)(Borisova, T.I.)

GORSKOV, V.A.-inzhener.

"Work organization for polishers and diamond cutters processing tea glasses." Reviewed by V.Gorskov. Leg.prom. 16 no.5:56. (MLRA 9:8)

(Glassware)